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EXAMINER

KRUER, KEVIN R

ART UNIT	PAPER NUMBER
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1794

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. ***Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading.*** If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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3. Claims 1, 2, 7, 10, 11, 12, 13, and 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmukler et al (US 4,430,135) in view of Tanaka et al (US 5,695,838).

Schmukler teaches an adhesive composition for bonding polyolefin substrates to polar substrates (abstract). The adhesive comprises a blend of (i) 0.1-40pbw of a polyethylene grafted with ethylenically unsaturated carboxylic acids and (ii) 99.9-60pbw of a mixture comprising 25-90wt% HDPE, and 75-10wt% of a polypropylene (claim 1). Said adhesive is used in packaging films (col 5, lines 25+) wherein the polyolefin layer of the packaging film is understood to read on the weldable layer of claim 31.

Schmukler is relied upon as above but does not teach that the graft copolymer may be replaced with a blend comprising (C1) and (C2). However, Tanaka teaches an adhesive composition comprising (a) 50-90pbw of a modified polypropylene comprising a graft consisting of unsaturated carboxylic acid or derivative thereof and (b) 10-50pbw of a modified polyolefin comprising a graft consisting of an unsaturated carboxylic acid or derivative thereof (abstract). The polyolefin may comprise a metallocene catalyzed polyethylene (see examples) with a density of 0.86-0.93 (claim 1). The grafting ratio of the composition is 0.01-5wt%, which reads on the claimed content of claim 1. Furthermore, each component has a melt flow between 0.5-30g/10min (col 4, lines 5+). Said blend has excellent adhesion, heat resistance, gas barrier properties and shrink properties (col 5, lines 17+). Thus, it would have been obvious to the skilled artisan at the time the invention was made to utilize the blend of Tanaka in place of component (i)

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taught in Schmukler. The motivation for doing so would have been to increase the adhesion of the composition, the shrink properties, and the heat resistance.

4. Claims 1-8, and 10-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rantanen (US 4,874,656) in view of Schmukler et al (US 4,430,135) and further in view of Tanaka et al (US 5,695,838).

Rantanen teaches a packaging film comprising an outer polyester layer comprising PET (herein relied upon to read on the claimed BOPET layer), a first inner layer of oriented polypropylene (herein relied upon to read on claimed layer 3) and a metallic foil (abstract). The metallic foil may comprise Al, Ag, or Cu and has a thickness of 9-18um (col 2, lines 8+). The laminate comprises adhesives between the layers (col 2, lines 23+). The adhesive layers are applied in amounts of 1-10g/m² (col 2, lines 20+). The polypropylene layer may have a thickness of 20-40um (col 2, lines 1+).

Rantanen is relied upon as above but does not teach the adhesive layers between the foil and the polypropylene and between the polyester and polypropylene may comprise the claimed tie layer composition. However, Schmukler teaches an adhesive composition for bonding polyolefin substrates to polar substrates (abstract). The adhesive comprises a blend of (i) 0.1-40pbw of a polyethylene grafted with ethylenically unsaturated carboxylic acids and (ii) 99.9-60pbw of a mixture comprising 25-90wt% HDPE, and 75-10wt% of a polypropylene (claim 1). Said adhesive is used in packaging films (col 5, lines 25+). It would have been obvious to the skilled artisan to utilize the adhesive taught in Schmukler as the adhesive layers of Rantanen's laminate because said adhesive has excellent adhesion between polyolefin and polar layers.

Schmukler is relied upon as above but does not teach that the graft copolymer may be replaced with a blend comprising (C1) and (C2). However, Tanaka teaches an adhesive composition comprising 50-90parts by weight of a modified polypropylene comprising a graft consisting of unsaturated carboxylic acid or derivative thereof and (b) 10-50pbw of a modified polyolefin comprising a graft consisting of an unsaturated carboxylic acid or derivative thereof (abstract). The polyolefin may comprise a metallocene catalyzed polyethylene (see examples) with a density of 0.86-0.93 (claim 1). The grafting ratio is 0.01-5wt%, which reads on the claimed content of claim 1. Each component has a melt flow between 0.5-30g/10min (col 4, lines 5+). Said blend has excellent adhesion, heat resistance, gas barrier properties and shrink properties (col 5, lines 17+). Thus, it would have been obvious to the skilled artisan at the time the invention was made to utilize the blend of Tanaka in place of component (i) taught in Schmukler. The motivation for doing so would have been to increase the adhesion of the composition, the shrink properties, and the heat resistance.

With regards to claims 8 and 18-20, it is known in the art that biaxially orienting PET increases the film's tensile strength, impact strength, flex life, and barrier properties (see US 2,968,065). Therefore, it would have been obvious to biaxially orient the PET film taught in Rantanen. The motivation for doing so would have been that it is known in the art to biaxially orient PET in order to improve its physical properties. With regards to claim 20, the adhesive layer between the PET and PP layers taught in Rantanen is understood to read on layer 4 of claim 6 and the "an adhesive" of claim 20.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN R. KRUEER whose telephone number is (571)272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin R Kruer/
Primary Examiner, Art Unit 1794